



Fact Sheet

Date: May 7, 1999

NPDES Permit Number: AK-005278-7

The U.S. Environmental Protection Agency (EPA) Plans To Reissue A Wastewater Discharge Permit To:

**Trident Seafoods Corporation
5303 Shilshole Avenue N.W.
Seattle, WA 98107-1720**

EPA Proposes NPDES Permit Reissuance.

EPA proposes to reissue a *National Pollutant Discharge Elimination System* (NPDES) permit to Trident Seafoods Corporation. The proposed permit sets conditions on the *discharge of pollutants* from the Trident Seafoods plant- Sand Point seafood to Popof Strait, Alaska. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged and places other conditions on the facility.

This Fact Sheet includes:

- the tentative determination of EPA to issue the permit,
- information on public comment, public hearing, and appeal procedures,
- a description of the *facility* and proposed discharge,
- a map and description of the discharge location,
- a listing of past and proposed effluent limitations, schedules of compliance, and other conditions, and
- technical material supporting the conditions in the permit.

EPA Invites Comments on the Proposed Permit.

EPA will consider all substantive comments before reissuing the final NPDES permit. Those wishing to comment on the proposed permit may do so in writing by the expiration date of the Public Notice. After the Public Notice expires and the public comments have been considered, EPA Region 10's Office of Water Director will make a final decision regarding permit reissuance.

If no substantive comments are received, the tentative conditions in the proposed permit will become final and the permit will become effective upon issuance. If comments are received, EPA will respond to the comments and the permit will become effective 30 days after its issuance date, unless a request for an evidentiary hearing is submitted within 30 days.

Documents Are Available for Review.

The proposed NPDES permit and related documents can be reviewed at EPA's Regional Office in Seattle between 9:00 a.m. and 4:00 p.m., Monday through Friday. To request copies and other information, contact the NPDES Permits Unit at:

United States Environmental Protection Agency, Region 10
1200 Sixth Avenue, OW-130
Seattle, Washington 98101
(206) 553-1214 or
1-800-424-4372 (from Alaska, Idaho, Oregon and Washington)

The fact sheet and proposed permit are also available at:

Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, Alaska 99501
(907) 269-7500
Attention: Water Permits.

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1 APPLICANT

Trident Seafoods Corporation
5303 Shilshole Avenue N.W.
Seattle, WA 98107-1720

2 TYPE OF FACILITY AND ACTIVITY

2.1 Facility Location and Description

Trident Seafoods owns, operates, and maintains the Trident Seafoods plant- Sand Point, a facility which conducts seafood processing and seafood meal reduction. Trident Seafoods- Sand Point is located in the City of Sand Point, Alaska. The facility lies at 55°20'08" north, 160°30'09" west on Popof Island, USGS hydrologic unit number 19030101. The map in Appendix A shows the location of Trident Seafoods plant- Sand Point. The diagram of the grounds of the facility in Appendix B shows the lay of the building, docks and outfall lines. The facility consists of (1) a large onshore facility which houses finfish processing lines, (2) a meal reduction facility, (3) two docks, and (4) assorted residential and support buildings.

2.2 Process Description

Trident Seafoods plant- Sand Point processes minced and filleted pollock, Pacific cod, herring, halibut, rockfish, black cod, and octopus. Trident takes receipt of the seafood catch from fishermen along its piers and docks, offloading the catch in large vacuum lines or baskets. Seafood is butchered by machine and by hand in any of several processing lines throughout the facility. The butchering wastewater is collected and passed through a screening system to capture offal (i.e., residual solid by-products of butchering such as fish heads and entrails) which is dehydrated and reduced to meal as a marketable secondary product. During off-season, low volume fisheries the facility does not produce a sufficient amount of processing offal to supply the meal plant with the volume of raw material required for operation and waste solids are ground to one-half inch prior to discharge.

2.3 Facility History and Performance

The Trident Seafoods plant- Sand Point's NPDES permit expired Oct. 31, 1994. Since then, the facility has expanded to include a meal reduction plant which retains seafood solid residues and thereby reduces pollutant discharges. The addition of the meal plant has increased the volumes of non-contact cooling wastewater and air emission scrubber wastewater. The addition of the meal plant has decreased the discharges of biochemical oxygen demand, total suspended solids (TSS), settleable solid seafood residues, and floating process residues. The proposed permit takes into account and addresses these new operational conditions.

The permittee's application shows that the facility's average flow is about four million gallons per day, 2.0 MGD of which is seafood processing wastewater and 2.0 MGD of which is scrubber and other non-contact wastewater. Review of the discharge monitoring reports reveals that the facility has reported general compliance with its Oct. 30, 1989 permit effluent limits.

3 PROPOSED DISCHARGE

3.1 Nature, Amount, and Composition of Discharge

Trident Seafood's plant- Sand Point discharges seafood processing wastewater consisting of biochemical oxygen demand (BOD₅), total suspended solids (TSS), settleable solid processing residues, floating residues, and scum. The effluent discharge may also contain trace amounts of disinfectants. The plant also discharges various non-contact scrubber wastewater and cooling wastewaters from the refrigeration condenser and motors which may be as much as 10°C above ambient temperatures and contain trace amounts of other pollutants.

3.2 Treatment of Wastewater Prior to Discharge

Trident Seafoods plant- Sand Point has upgraded its effluent treatment from the technology-based standard for remote locations in Alaska of grinding waste solid residuals to one half inch prior to discharge to the more stringent screening of all finfish wastes to approximately one half millimeter prior to discharge. As mentioned above, this one half millimeter screening and meal reduction will reduce the facility's effluent discharges of long-term biochemical oxygen demand (estimated decrease of more than 85%), TSS (estimated decrease of more than 97%), settleable solid process residues (estimated decrease of more than 99%), and floating solid process residues (estimated decrease of more than 99%).

4 RECEIVING WATER

4.1 Nature of Popof Strait

Popof Strait is located in the Aleutians East Borough between Popof Island and Unga Island. The strait is approximately three miles long and one mile wide, and has strong tidal current flows in both directions. The watershed includes the small community of the City of Sand Point, the Trident Seafoods processing facility, a commercial and recreational boat harbor, a road connecting Sand Point with the community airstrip, and several large tributary streams.

4.2 Beneficial Uses of Popof Strait

Designated beneficial uses for Alaska's marine waters are established by regulation and are found in the State of Alaska Water Quality Standards [18 AAC 70]. For marine waters of the state, these designated uses include: (1) water supply, (2) water recreation, (3) growth and propagation of fish, shellfish, other aquatic life, and wildlife, and (4) harvesting for consumption of raw mollusks or other raw aquatic life [18 AAC 70.020(a)(2)].

4.3 Issues of Site-specific Interest

Prior to the installation of the meal plant and fine screens, seafood wastes were reported to have been deposited along the highwater mark in and across Mud Bay, a shallow tidal bay approximately one mile to the north northwest of Trident Seafoods- Sand Point. The Alaska Water Quality Standards (AWQS) state that residues in marine waters "May not ... cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines" [AAC §18.70.020(b)(2)].

Dive surveys around the outfall have indicated little to no accumulation of seafood processing waste residues. Dive surveys have not been conducted of the sixty foot hole to the south of the outfall, a potential area for the accumulation of settleable solid seafood residues.

5 BASIS FOR EFFLUENT LIMITATIONS AND MONITORING

5.1 General Approach

EPA followed the Clean Water Act, state regulations, and EPA's 1991 *Technical Support Document for Water Quality-Based Toxics Control* (TSD) to develop the proposed effluent limits.

In general, the Clean Water Act requires that the effluent limit for a particular pollutant be the more stringent of either the *technology-based limit* or the *water quality-based limit*. This proposed permit includes both technology-based and water quality-based limits. Technology-based limits are established based upon the level of treatment that is achievable using available technology. Water quality-based limits are designed to prevent exceedance of the Alaska Water Quality Standards (AWQS) in Popof Strait. Appendix C contains more detail about how EPA established these water quality-based limits on settleable solid seafood residues.

5.2 Summary of Effluent Limitations, Past and Proposed

Table I: Comparison of Permit Limits				
Parameter	Past Average	Past Maximum	Proposed Average	Proposed Maximum
Settleable Solids, particle size finfish wastes crab wastes	no limit	0.5 inch 0.5 inch	no limit	1 mm 0.5 inch
Settleable Solids, annual load zero acre zone of deposit @ 1 mm zero acre zone of deposit @ ½ in one acre zone of deposit @ 1 mm one acre zone of deposit @ ½ in two acre zone of deposit @ 1 mm two acre zone of deposit @ ½ in	no limit	no limit	no limit	540,000 lbs/yr 180,000 lbs/yr 2,700,000 lbs/yr 10,800,000 lbs/yr 6,300,000 lbs/yr 36,000,000 lbs/yr
pH, standard units	no limit	no limit	no limit	from 6.5 to 8.5

The proposed permit requires that finfish processing wastewaters shall be screened to at least one millimeter width and that small-volume fishery processing wastes shall be ground to one half inch width prior to discharge through the on-site outfalls. The proposed permit further provides that all seafood processing solid waste residues shall be ground to one half inch width prior to discharge at sea in depths greater than 120 ft MLLW and at a distance of one mile from shore.

The proposed permit also prohibits discharges of waste streams that are not part of the normal operation of the facility as reported in the permit application.

5.3 Technology-based Evaluation

Section 301 of the Clean Water Act requires particular categories of industrial dischargers to meet technology-based effluent limitation guidelines. The intent of a technology-based effluent limitation is to require a minimum level of treatment for industrial and municipal *point sources* across the country based on currently available treatment technologies while allowing a discharger to choose and use any available pollution control technique to meet the limitations. Where EPA has not yet developed guidelines for a particular industry, EPA can establish permit limitations using Best Professional Judgment (BPJ; 40 CFR §§ 122.43, 122.44 and 125.3).

EPA has determined that discharges of seafood processing wastes shall not exceed one half inch in any dimension (see 40 CFR § 408) when processed and discharged in remote Alaskan locations. In the case of seafood processors discharging large quantities of solid seafood waste residues which produce persistent deposits of more than one acre on the sea floor, EPA has made a BPJ determination that wastewater must be screened to one millimeter width prior to discharge. In order to reduce the pollutant load, solid residues must be screened, collected, and either reduced to meal or transported for disposal from an underway vessel to offshore waters as designated by EPA and the State of Alaska. The history of meal reduction in Alaska has demonstrated that screening and meal reduction significantly reduces pollutant discharges by supporting the production of a profitable by-product for export!

5.4 Mixing Zone and Other Variances to State Water Quality Standards

The State of Alaska, through ADEC, can authorize a number of site-specific variances to the Alaska Water Quality Standards. *Variances* to AWQS include site-specific water quality criteria (18 AAC §§ 70.220 and 70.235), a *mixing zone* wherein AWQS may be exceeded (18 AAC § 70.240), a *zone of deposit* wherein the AWQS criteria for settleable residues may be exceeded (18 AAC § 70.210), and short-term variances from the anti-degradation policy standard or the water quality criteria (18 AAC § 70.200). In addition, ADEC may exercise enforcement discretion in determining whether to initiate an enforcement action on a water quality violation (18 AAC § 70.900).

In the case of this permit, Trident Seafoods plant- Sand Point will apply for (1) a mixing zone of 25 ft radius around its non-contact water outfall 002, (2) a mixing zone of 25 ft radius for pH and temperature and a mixing zone of 100 ft radius for color, turbidity, and floating and suspended residues around the processing wastewater discharge of outfall 001, and (3) a one acre zone of deposit on the sea floor around outfall 001 for settleable solids seafood processing residues. ADEC has indicated that it will approve these variances in its State certification of the NPDES permit.

5.5 Water Quality-based Evaluation

Water quality-based limits are derived from the Alaska Water Quality Standards to protect the water quality and beneficial uses of Alaskan waters. The NPDES regulation at 40 CFR § 122.44(d)(1) requires that permits include limits for all pollutants or parameters which “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.” The limits must be stringent enough to ensure that state water quality standards are met, and must be consistent with any available wasteload allocation established in the assessment of a total maximum daily load of pollutant discharges to a receiving water. Based upon the Trident Seafoods’ monitoring of its effluents and its receiving waters, water quality-based limits are justified for three

pollutants: settleable solid seafood processing residues, temperature, and pH (a measure of the acidity or alkalinity of the wastewaters).

Trident Seafoods has requested that the permit limits for settleable solid residues provide for a discharge of a combination of both screened finfish wastes and ground seafood wastes. EPA has completed an assessment of allowable discharges of both screened and ground wastes for a zero acre, one acre and two acre zone of deposit (Appendix C). At the publication of this fact sheet, ADEC has tentatively approved a one acre ZOD

The most stringent State criteria for pH are those for the growth and propagation of fish, shellfish, and other aquatic life: pH may not be less than 6.5 or greater than 8.5, and may not vary more than 0.1 pH unit from natural conditions in the receiving water. The criteria for maximum and minimum pH are used as end-of-pipe water quality-based limits in the permit. It is EPA's best professional judgment that the criterium of no variation of more than 0.1 pH unit from natural conditions of Alaska's coastal marine waters will be met outside of a 25 ft radius zone of initial dilution.

Additionally, the permit only authorizes the discharge of effluents up to 25°C. The State of Alaska has tentatively approved mixing zones of 25 ft radius around each of the outfalls in order to allow an initial zone of dilution and cooling of thermal discharges to within 1°C of ambient temperatures of the receiving water. It is EPA's best professional judgment that the criterium of no variation of more than 1°C from natural conditions of Alaska's coastal marine waters will be met outside of a 25 ft radius zone of initial dilution.

Antidegradation of Water Quality. In proposing to reissue this permit, EPA has considered the State's antidegradation policy [18 AAC 70.015]. This policy states, in part, that in Alaska: "the existing water uses and the level of water quality necessary to protect the existing uses must be maintained and protected (and), if the quality of a water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality must be maintained and protected unless the department (ADEC)... allows the reduction in water quality...". The permit, as stated above, allows and limits effluent discharges of temperature, pH, and residues. The limits in the draft permit are consistent with and protective of the State water quality standards and the water quality of the receiving water. EPA believes that the draft permit is consistent with the State's antidegradation policy.

5.6 Summary of Effluent Monitoring

The Clean Water Act requires that monitoring shall be included in permits to determine compliance with effluent limitations. Monitoring may also be required to gather data for future effluent limitations or to monitor effluent impacts on the receiving water. The Permittee will be responsible for conducting the monitoring and for reporting the results to EPA. Table II presents the proposed monitoring requirements based on the minimum sampling necessary to adequately monitor the facility's performance. For comparison purposes, the table also shows the monitoring requirements in the past permit.

TABLE II. Comparison of Monitoring Requirements		
Parameter	Past Frequency and Sample Type	Proposed Frequency and Sample Type
Flow, mgd	no monitoring	daily, continuous
Biochemical Oxygen Demand, BOD ₅	no monitoring	once per month, six months per yr; 24-hr composite
Oil and Grease, O&G concentration (mg/L) and mass load (lbs/day)	no monitoring	once per month, six months per yr; 24-hr composite
Total Suspended Solids, TSS concentration (mg/L) and mass load (lbs/day)	no monitoring	once per month, six months per yr; 24-hr composite
Settleable Solids concentration (mg/L) and mass load (lbs/day)	no monitoring	once per week, six months per yr; 24-hr composite
pH	no monitoring	once per week, six months per yr; grab or probe

The permit requires weekly effluent monitoring of pollutant parameters for which a limit or condition exists within the permit and monthly effluent monitoring for parameters on which data is necessary to verify that no permit limits are required in this or future permits (40 CFR §§ 122.41 and 122.44). Monitoring is conducted during six of the twelve months per year as sufficient to collect representative samples which quantify both concentrations and mass loading for the facility; the sampling months coincide with fishing seasons and attendant high levels of pollutant discharge.

Representative Sampling. The proposed permit requires sampling whenever a bypass, spill, or non-routine discharge of pollutants occurs, if such a discharge could cause a violation of an effluent limit.

6 BASIS FOR BEST MANAGEMENT PRACTICES PLAN

The Clean Water Act and federal regulations authorize EPA to require *best management practices*, or BMPs, in NPDES permits. BMPs are measures for controlling the generation of pollutants and their release to waterways. For many facilities, these measures are typically included in the facility Operation & Maintenance plans (O&M) plans. BMPs are important tools for waste minimization and pollution prevention. EPA encourages facilities to incorporate BMPs into their O&M plans and to revise them as new practices are developed.

The proposed permit requires Trident Seafoods to develop and implement a BMP plan within 180 days of permit issuance. The Permittee must develop a materials balance assessment (i.e., a flow diagram) of its process, treatment and discharge lines and quantify the input and output streams of water and pollutants. The Permittee must consider the optimization of product recovery and chemical use, staff training aimed at controlling the discharge of pollutants to Popof Strait, spill prevention and control, and water conservation. The Permittee must document this assessment as a working document known as a BMP plan in accordance with the requirements of the permit.

7 BASIS FOR ENVIRONMENTAL MONITORING

The proposed permit requires Trident Seafoods to monitor the receiving water for the discharge and accumulation of residues on the sea floor, sea surface and shoreline and for the degradation of dissolved oxygen concentrations in the water column. The purpose of this monitoring is to verify the assumptions made in developing permit limits regarding receiving water conditions and the effectiveness of permit limits. Based on the results of this study, EPA will determine whether or not to revise these permit limits when the permit is renewed.

Ambient monitoring of the residues on the sea surface and sea floor and of dissolved oxygen within the water column are important in monitoring the effect of the Trident Seafoods plant on Popof Strait. Weekly surveys and records of the sea surface and sea shore for scum and other residues are required in the permit. Monitoring of settleable residues on the sea floor is required as a dive survey in the area around the outfall.

The proposed permit requires the Permittee to submit study plans to EPA for approval. The plan must address issues such as appropriate sampling location, variability in the receiving water, appropriate sampling and analytical methods, analytical variability, and quality assurance/quality control for sampling and analysis.

8 BASIS FOR ANNUAL REPORT

The proposed permit requires the Permittee to complete and submit an annual report which compiles effluent and environmental monitoring data and reports permit violations, upset conditions, by-pass conditions, plant or process changes, and corrective actions undertaken to improve wastewater treatment and pollution prevention at the facility. The annual report provides a comprehensive record of wastewater discharge at the facility and its effect on the receiving water and supports improved understanding and management of the discharges and discussion of these discharges by the Permittee and government representatives. Title 40 of the Code of Federal Regulations provides the regulatory basis for this requirement at sections 122.41 ("Conditions applicable to all permits"), 122.44(i) ("Monitoring requirements"), and 122.48 ("Requirements for recording and reporting of monitoring results").

9 PERMIT CONDITIONS FOR COMPLIANCE, RECORDING, REPORTING, AND OTHER GENERAL PROVISIONS

Sections § VI through VIII of the draft permit contain standard regulatory language that is required to be in all NPDES permits. The following sections of the permit are based largely upon 40 CFR Part 122, subpart C, "Permit Conditions" and on other referenced laws and regulations.

- Duty to Comply from 40 CFR § 122.41(a),
- Proper Operation and Maintenance from 40 CFR § 122.41(e),
- Duty to Mitigate from 40 CFR § 122.41(d),
- Toxic Pollutants from 40 CFR § 122.41(a)(1-2), § 122.44(b, e), and § 125.3,
- Removed Substances from 40 CFR § 122.41(a)(1) and (o) and CWA § 405(A),
- Need to Halt or Reduce Activity not a Defense from 40 CFR § 122.41(c),
- *Bypass* of Wastewater Treatment from 40 CFR § 122.41(m),
- *Upset* Conditions from 40 CFR § 122.41(n),
- Inspection and Entry from 40 CFR § 122.41(i),
- Penalties for Violations of Permit Conditions from 40 CFR § 122.41(a)(2-3),
- Duty to Provide Information from 40 CFR § 122.41(h),
- Records Contents from 40 CFR § 122.41(j)(3),
- Submittal of Reports from 40 CFR § 122.41(h, j, and l),
- Retention of Records and Reports from 40 CFR § 122.41(j)(2),
- On-site Availability of Records and Reports from 40 CFR § 122.41(i)(2),
- Availability of Reports for Public Review from 40 CFR § 122.1(e) and § 122.7(1) and 40 CFR § 2.101,
- Planned Changes from 40 CFR § 122.41(l)(1),
- Changes in the Discharge of Toxic Substances from 40 CFR § 122.42(a),
- Anticipated Noncompliance from 40 CFR § 122.41(l)(2),
- Reporting of Noncompliance from 40 CFR § 122.41(l)(6-7) and § 122.44(g),
- Permit Actions from 40 CFR § 122.44(c) and 40 CFR § 122.61 - § 122.64,
- Duty to Reapply from 40 CFR § 122.41(b),
- Incorrect Information and Omissions from 40 CFR § 122.41(l)(8),
- Signatory Requirements from 40 CFR § 122.41(k),
- Property Rights from 40 CFR § 122.41(g),
- Severability from 40 CFR § 124.16,
- Transfers from 40 CFR § 122.41(l)(3),
- Oil and Hazardous Substance Liability from 40 CFR § 125.3, 40 CFR part 300, 33 CFR § 153.10(e), and section 311 of the Act,
- State Laws from 40 CFR § 122.1(f) and section 510 of the Act, and
- Reopening of the Permit from 40 CFR § 122.41(f) and § 122.44(c).

10 OTHER LEGAL REQUIREMENTS

10.1 State Water Quality Standards and Certification

EPA is requesting State officials to review and provide appropriate certification to this NPDES permit pursuant to 40 CFR § 124.53. Since State waters are involved in the draft permit, the provisions of Section 401 of the Clean Water Act apply, requiring EPA to seek State certification that the permit is protective of the State Water Quality Standards before issuing a final permit. This certification by the State ensures that federally issued permits are in compliance with the laws of the State (see 40 CFR § 124.55). In particular, ADEC must provide written stipulation for a water quality study of the receiving water and authorization of mixing zones and a zone of deposit in its certification of the permit. In accordance with 40 CFR §124.10(c)(1), public notice of the draft permit has been provided to the State agencies having jurisdiction over fish, shellfish and wildlife resources, and over coastal zone management plans.

10.2 Endangered Species Act

Pursuant to 40 CFR § 122.49(c), EPA has concluded that the localized effluent discharges authorized by this permit will have no effect on the continued existence of any endangered or threatened species and will not adversely affect their critical habitat. Endangered species found in the vicinity of the discharge include Eskimo curlew (*Numenius borealis*), American peregrine falcon (*Falco peregrinus anatum*), Aleutian shield-fern or Aleutian holly-fern (*Polystichum aleuticum*), short-tailed albatross (*Diomedea albatrus*), humpback whale (*Megaptera novaeangliae*), right whale (*Eubalaena glacialis*), and blue whale (*Balaenoptera musculus*). Threatened species found in the vicinity of the discharge include Spectacled eider (*Somateria fischeri*), Steller's eider (*Polysticta stelleri*), Aleutian Canada goose (*Branta canadensis leucopareia*), and Steller sea lion (*Eumetopias jubatus*).

The draft permit, fact sheet and consistency determination will be submitted to the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) for review at the time of public notice. EPA is requesting concurrence from USFWS and NMFS on the draft permit, and will consider their comments in the final permit decision. EPA will initiate consultation should new information reveal impacts not previously considered, should the activities be modified in a manner beyond the scope of the original opinion, or should the activities affect a newly listed threatened or endangered species.

10.3 Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act requires EPA to consult with NMFS with respect to the reissuance of this NPDES permit concerning its impacts on any essential fish habitat and to provide a description of the measures

proposed to avoid, mitigate, and offset the impact of this permitted discharge on such habitat. EPA finds that the permitted discharge will comply with Alaska Water Quality Standards outside of the authorized zones of variance, that decreases in marine life within these zones will be compensated by increases in the abundance of marine life in surrounding zones of organic enrichment, and that issuance of this permit is not likely to adversely affect any species in the vicinity of the discharge. EPA provides this fact sheet to describe the discharge, the draft permit, and the permit's limits, conditions, and measures of mitigation.

10.4 Coastal Zone Management Act

The Applicant has certified that the activities authorized by this draft permit are consistent with the Alaska Coastal Management Plan. The draft permit, fact sheet and consistency determination will be submitted to the State for review at the time of public notice. Pursuant to 40 CFR § 122.49(d), requirements for State coastal zone management review and approval must be satisfied before the permit may be issued.

10.5 Pollution Prevention Act

It is national policy that, whenever feasible, pollution should be prevented or reduced at the source, that pollution which cannot be prevented should be recycled in an environmentally safe manner, and that disposal or release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner. The Permittee will discharge at the facility in accordance with best management practices which will address the provisions of the Pollution Prevention Act.

10.6 Oil Spill Requirements

Section 311 of the Clean Water Act prohibits the discharge of oil and hazardous materials in harmful quantities. Discharges specifically controlled by the draft permit are excluded from the provisions of Section 311 because these discharges are limited to amounts and concentrations which are deemed to be protective of State water quality standards. However, this permit does not preclude the institution of legal action or relieve the Permittee from any responsibilities, liabilities, or penalties for other unauthorized discharges of toxic pollutants which are covered by Section 311 of the Act.

11 MODIFICATION OF PERMIT LIMITS OR OTHER CONDITIONS

When EPA receives information that demonstrates the existence of reasonable cause to modify the permit in accordance with 40 CFR § 122.62(a), EPA may modify the permit. "Reasonable cause" includes alterations or additions to the facility or activity, new federal regulations or standards, new state water quality standards, the completion or modification of total maximum daily loads or wasteload allocations for the receiving

water of the facility (also, see 40 CFR § 122.44(d)((1)(vii)(B)), failure of the permit to protect state water quality standards, a change in a permittee's qualification for net limits, any relevant compliance schedule, the need to incorporate or revise a pretreatment or land application plan, when pollutants which are not limited in the permit exceed the level which can be achieved by technology-based treatment, the correction of technical mistakes and legal misinterpretations of law made in determining permit conditions, and the receipt of new information relevant to the determination of permit conditions. Minor modifications to a permit may be made by EPA with the consent of a permittee in order to correct typographical errors, change an interim compliance schedule, allow for a change in ownership, change a construction schedule, or delete an outfall. Pursuant to 40 CFR § 122.63, such minor modifications may be made without public notice and review.

12 PERMIT EXPIRATION

This permit will expire five years from its effective date. In accordance with 40 CFR § 122.6(a), the conditions of an expired permit continue in force under 5 U.S.C. § 558(c) until the effective date of a new permit when a permittee submits an application for permit reissuance 180 days before the expiration of the permit. Permits which are continued because EPA has not reissued a new permit remain fully effective and enforceable.

13 GLOSSARY OF TERMS AND ACRONYMS

§ means section or subsection.

AAC means Alaska Administrative Code.

ADEC means Alaska Department of Environmental Conservation.

Average monthly discharge means the average of "daily discharges" over a monitoring month, calculated as the sum of all daily discharges measured during a monitoring month divided by the number of daily discharges measured during that month. It may also be referred to as the "monthly average discharge."

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or **waste** disposal, or drainage from raw material storage.

BOD5 means biochemical oxygen demand, five-day.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

°C means degrees Celsius.

CFR means Code of Federal Regulations.

Cooling water means once-through non-contact cooling water.

CWA means the Clean Water Act, (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483 and Public Law 97-117, 33 U.S.C. 1251 et seq.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Daily maximum discharge means the highest allowable "daily discharge" and is also referred to as the "maximum daily discharge."

Discharge of a pollutant means any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA.

DO means dissolved oxygen.

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

EPA means U.S. Environmental Protection Agency.

ESA means the Endangered Species Act.

$^{\circ}F$ means degrees Fahrenheit.

Facility or activity means any NPDES “point source” or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

lb means pound.

Maximum means the highest measured discharge or pollutant in a waste stream during the time period of interest.

Maximum daily discharge limitation means the highest allowable “daily discharge.”

MGD means million gallons per day.

mg/L means milligrams per liter.

Mixing zone means the zone of dilution authorized by ADEC under 18 AAC 70.032 wherein pollutant concentrations may exceed the criteria of the Alaska Water Quality Standards for the proscribed pollutants.

MLLW means mean lower low water.

mg/L means milligrams per liter.

ml means milliliter.

NMFS means National Marine Fisheries Service.

National Pollutant Discharge Elimination System (“NPDES”) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA.

OW means EPA’s Office of Water.

P.L. means (U.S.) Public Law.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

QAPP means quality assurance project plan.

Schedule of compliance means a schedule of remedial measures included in a "permit", including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the CWA and regulations.

sp. means species.

Sanitary wastes means human body waste discharged from toilets and urinals.

Seafood means the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

Seafood process waste means the waste fluids, organs, flesh, bones, and chitinous shells produced in the conversion of aquatic animals and plants from a raw form to a marketable form.

Settleable solid process residues means process waste solids that gravimetrically settle out of the process wastewater and accumulate on the bottom of a wastewater discharge collection sump (which typically has a residence time of 15 minutes).

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Technology-based limit means a permit limit or condition based upon EPA's technology-based effluent limitation guidelines or EPA's best professional judgment.

TSS means total suspended solids.

USGS means U.S. Geologic Service.

USFWS means U.S. Fish and Wildlife Service.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Variance means any mechanism or provision under section 301 or 316 of CWA or under 40 CFR part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors or on sections 301(c), 301(g), 301(h), 301(i), or 316(a) of CWA.

Water depth means the depth of the water between the surface and the sea floor as measured at mean lower low water (0.0).

Water quality-based limit means a permit limit derived from a state water quality standard or an appropriate national water quality criteria.

Waters of the United States or waters of the U.S. means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (b) All interstate waters, including interstate wetlands;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Zone of deposit (ZOD) means an area of the bottom in marine, coastal, or estuarine waters in which ADEC has authorized the deposit of residues in exceedence of the water quality criteria of 18 AAC 70.020(b) and the antidegradation requirement of 18 AAC 70.0101(c).

14 REFERENCES

USEPA. 1991. Technical support document for water quality-based toxics control. Office of Water, Washington, D.C. EPA/505/2-90-001.

USEPA. 1993. Guidance manual for developing best management practices (BMP). Office of Water, Washington, D.C. EPA/833/2-93-004.

USEPA. 1996. NPDES permit writers' manual. Office of Wastewater Management, Washington, D.C. EPA/833/B-96-003.

USEPA. 1998. Total maximum daily load (TMDL) for seafood residues in the waters of Popof Strait, Alaska. USEPA Region 10, Office of Water, 1200 Sixth Avenue, Seattle, Washington. October 9, 199.

POPOF STRAIT
NORTHERN PART

Mercator Projection
Scale 1:20,000 at Lat. 55° 25'

SOUNDINGS IN FATHOMS.
FATHOMS AND FEET TO ELEVEN FATHOMS
AT MEAN LOWER LOW WATER

UNGA ISLAND

WIRE DRAGGED AREAS
The area tinted green was swept in 1942 for previously undetected dangers to navigation. All dangers found are shown on this chart.

SAND POINT TRIDENT

POPOF ISLAND

Humboldt Harbor
17 FT FOR MID WIDTH
OF 80 FOOT DOG

Sand Point

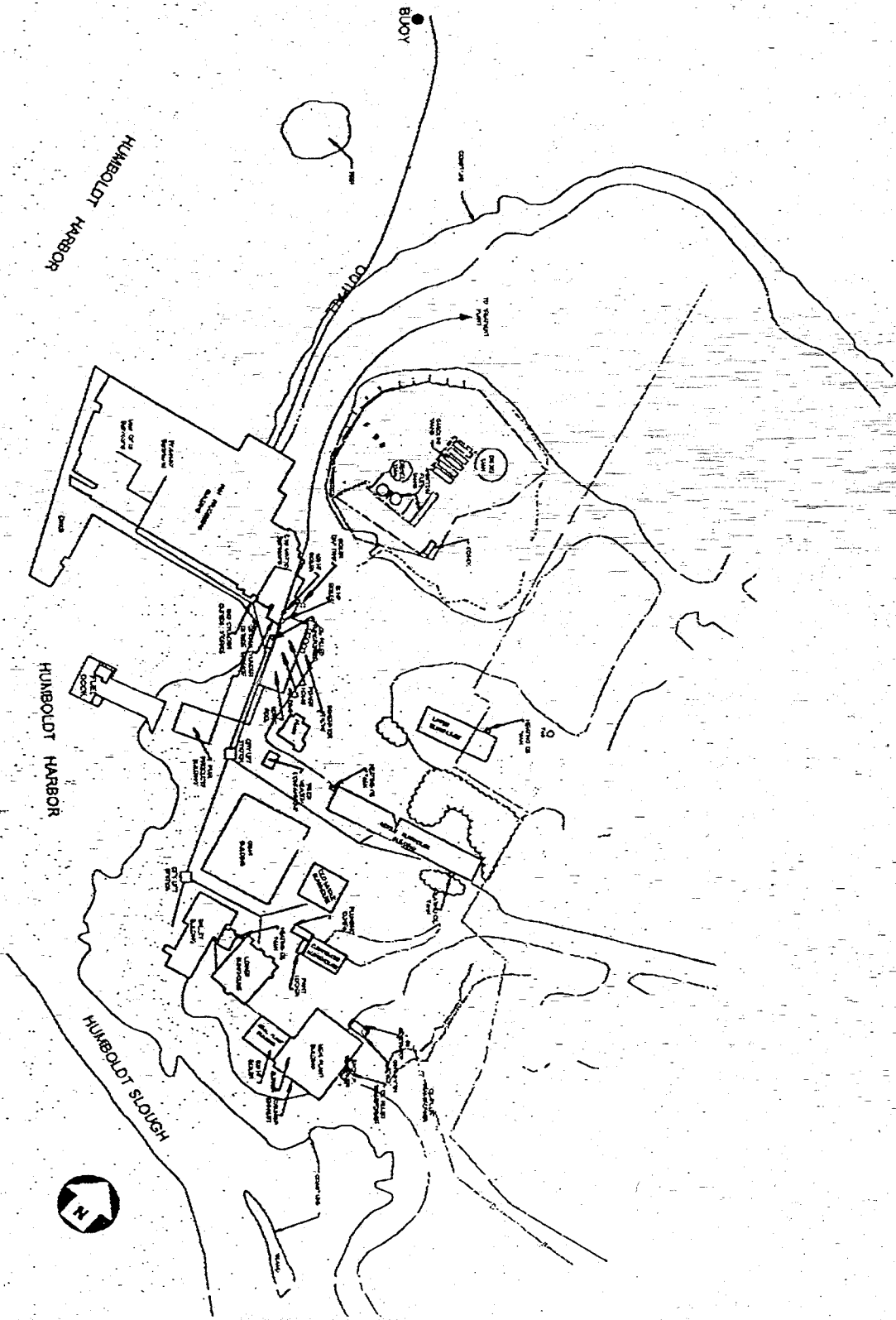
END OF OUTFALL

Radio Towers

Compass Rose
MAGNETIC
VAR 17° 15' 1930
ANNUAL DECREASE 7

Scale
Yards
0 500 1000 1500

APPENDIX B - Diagram of the Trident Seafoods plant- Sand Point



APPENDIX C - Report of Modeling the Discharge of Settleable Solid Seafood Residues

TECHNICAL BRIEF FOR EXPANDED SEAFOOD MODEL RUNS

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In support of the development of a general NPDES permit for shore-based, near shore, and offshore seafood processors, Tetra Tech prepared an ocean discharge criteria evaluation (ODCE) report in July 1994. The report concentrated on characterizing the effluent being discharge from the covered facilities and its potential effect on receiving waters. The report also developed preliminary modeling predictions for the deposition of solid seafood waste residues on the sea floor.

Technical directive No. 12 directed Tetra Tech to expand the modeling assessment of the deposition of settleable solid seafood waste residues from processors using different particle size assumptions. Tetra Tech was also directed to determine endpoints for maximum discharges which produce deposition areas of zero, one, and two acres using the case scenarios defined in the previous ODCE.

To accomplish this task, three general cases were modeled (i.e., 0.5 inch, 0.38 inch, and 0.04 inch maximum particle size) and the results are presented in Tables 1, 2, and 3, respectively. No changes in the WASP5 model were required to perform these model simulations, however, the input files used for each model run were modified as needed and are described below. Results of the predicted areal coverage of solid wastes for both the WASP output, based on the number and area of grids, and SURFER, based on contours of depth accumulation, are reported. In general, the determination of the endpoints for maximum discharges that produce zero, one, and two acre waste piles are based on the areas estimated by SURFER, the 3-dimensional contouring software.

Table 1 depicts the area and thickness of a waste pile which results from discharging seafood waste solids that have been ground to a maximum particle size of 0.5 inch. The assessment assumes that 60% of the loading mass of particles is 0.5" in diameter, 20% is 0.25", and 20% is 0.125".

Table 2 depicts the area and thickness of a waste pile which results from discharging seafood waste solids that have been ground to a maximum particle size of 0.375 inch. The assessment assumes that 60% of the loading mass of particles is 0.375" in diameter, 20% is 0.188", and 20% is 0.094".

Table 3 depicts the area and thickness of a waste pile which results from discharging seafood waste solids that have been ground to a maximum particle size of 0.04 inch (= 1 mm). The assessment assumes that 100% of the loading mass of particles is 0.04" in.

TABLE 1. SEAFOOD WASTE ACCUMULATION MODEL RESULTS
FOR MAXIMUM PARTICLE SIZE OF 1.27 CM (0.5 IN)

Case # ^a	Net-Drift Current Speed (cm/sec)	Water Depth (m)	Bottom Slope (%)	Waste Solids Discharge Rate (lb/yr wet weight)	Maximum Waste Accumulation Depth (cm)	Areal Coverage (acres)	
						S ^b	W ^c
Near-Bottom Shore-Based Discharges							
1	5.0	15.2	0.0	200,000	2.9	0.0	0.1
				16,000,000	230	1.0	0.8
				100,000,000	1,435	1.8	1.3
2	15.0	15.2	0.0	200,000	2.2	0.0	0.1
				12,000,000	133	1.2	1.0
				40,000,000	445	2.1	1.4
3	5.0	15.2	12.5	100,000	1.4	0.0	0.1
				20,000,000	230	1.0	0.8
				100,000,000	1,438	1.8	1.4
4	15.0	15.2	12.5	100,000	1.1	0.0	0.1
				16,000,000	179	1.3	1.1
				40,000,000	446.4	2.1	1.4
5	5.0	15.2	25.0	20,000,000	288	1.0	0.8
6	15.0	15.2	25.0	16,000,000	179	1.3	1.1
Near-Surface Floating Discharges in Open Ocean							
7	5.0	15.2	0.0	200,000	1.8	0.0	0.1
				8,000,000	63.4	1.0	0.8
				20,000,000	176.2	2.0	1.4
8	15.0	15.2	0.0	300,000	1.4	0.0	0.2
				4,000,000	19.2	1.2	0.6
				10,000,000	48.0	2.0	1.9
9	5.0	30.5	0.0	300,000	1.8	0.0	0.2
				4,000,000	24.2	1.1	0.9
				10,000,000	60.5	2.0	1.4
10	15.0	30.5	0.0	400,000	1.2	0.0	0.1
				4,000,000	12.3	1.3	1.0
				11,000,000	44.8	2.0	1.4
11	5.0	45.7	0.0	300,000	1.4	0.0	0.1
				4,000,000	18.5	1.2	1.2
				8,000,000	37.1	2.0	1.4
12	15.0	45.7	0.0	700,000	1.4	0.0	0.2
				4,000,000	8.0	1.3	1.0
				7,000,000	14.0	2.1	1.5

^a Case numbers correspond to the case scenarios outlined in Table 3-5 of the ODCE.

^b Area coverage of solid waste estimated by SURFER™.

^c Area coverage of solid waste estimated using WASP output.

TABLE 2. SEAFOOD WASTE ACCUMULATION MODEL RESULTS
FOR MAXIMUM PARTICLE SIZE OF 0.95 CM (0.38 IN)

Case # ^a	Net-Drift Current Speed (cm/sec)	Water Depth (m)	Bottom Slope (%)	Waste Solids Discharge Rate (lb/yr wet weight)	Maximum Waste Accumulation Depth (cm)	Areal Coverage (acres)	
						S ^b	W ^c
Near-Bottom Shore-Based Discharges							
1	5.0	15.2	0.0	100,000	1.3	0.0	0.1
				16,000,000	215	1.1	0.8
				90,000,000	1,214	2.0	1.6
2	15.0	15.2	0.0	150,000	1.5	0.0	0.1
				6,000,000	60.1	1.0	0.3
				28,000,000	280.3	2.0	1.4
3	5.0	15.2	12.5	150,000	2.0	0.0	0.1
				16,000,000	216.6	1.0	0.8
				90,000,000	1,218	2.0	1.6
4	15.0	15.2	12.5	150,000	1.5	0.0	0.1
				6,000,000	60.1	1.0	0.3
				28,000,000	280.8	2.0	1.4
Near-Surface Floating Discharges in Open Ocean							
7	5.0	15.2	0.0	200,000	1.5	0.0	0.1
				4,000,000	30.4	1.0	0.8
				15,000,000	114.1	2.0	1.4
8	15.0	15.2	0.0	400,000	1.5	0.0	0.2
				3,000,000	11.4	1.1	0.6
				9,000,000	34.2	2.1	1.9
9	5.0	30.5	0.0	300,000	1.5	0.0	0.1
				3,000,000	15.0	1.0	0.7
				8,000,000	40.0	2.0	1.4
10	15.0	30.5	0.0	400,000	1.4	0.0	0.2
				3,000,000	10.5	1.1	0.6
				7,600,000	26.5	2.0	2.3
11	5.0	45.7	0.0	400,000	1.5	0.0	0.2
				3,000,000	11.2	1.0	0.9
				7,000,000	26.2	2.0	1.9
12	15.0	45.7	0.0	800,000	1.3	0.0	0.2
				3,500,000	5.6	1.1	1.0
				7,000,000	11.0	2.1	1.0

^a Case numbers correspond to the case scenarios outlined in Table 3-5 of the ODCE.

^b Area coverage of solid waste estimated by SURFER™.

^c Area coverage of solid waste estimated using WASP output.

Case # ^a	Net-Drift Current Speed (cm/sec)	Water Depth (m)	Bottom Slope (%)	Waste Solids Discharge Rate (lb/yr wet weight)	Maximum Waste Accumulation Depth (cm)	Areal Coverage (acres)	
						S ^b	W ^c
Near-Bottom Shore-Based Discharges							
1	5.0	15.2	0.0	500,000 3,000,000 8,000,000	1.1 15.7 41.7	0.0 1.0 2.0	0.1 0.9 1.4
2	15.0	15.2	0.0	600,000 3,000,000 7,000,000	1.5 7.5 17.6	0.0 1.0 2.1	0.2 0.6 1.5
3	5.0	15.2	12.5	300,000 3,000,000 8,000,000	1.6 15.8 42.1	0.0 1.0 2.0	0.1 0.8 1.4
4	15.0	15.2	12.5	600,000 3,000,000 7,000,000	1.5 7.6 17.7	0.0 1.0 2.1	0.2 0.6 1.3
Near-Surface Floating Discharges in Open Ocean							
7	5.0	15.2	0.0	1,000,000 3,500,000 6,000,000	1.1 4.0 6.8	0.0 1.1 2.0	0.2 0.6 2.1
8	15.0	15.2	0.0	3,000,000 6,000,000 8,500,000	1.3 2.6 3.7	0.0 1.0 2.0	0.5 1.0 1.9
9	5.0	30.5	0.0	2,000,000 5,000,000 8,000,000	1.2 2.9 4.7	0.0 1.0 2.2	0.2 0.6 2.1
10	15.0	30.5	0.0	3,000,000 7,000,000 10,000,000	1.1 2.6 3.7	0.0 1.0 2.0	0.3 1.0 1.5
11	5.0	45.7	0.0	3,000,000 7,000,000 10,000,000	1.2 2.3 3.9	0.0 1.0 2.1	0.2 1.0 1.9
12	15.0	45.7	0.0	9,000,000 16,000,000 20,000,000	1.3 2.3 2.9	0.0 1.0 2.0	0.9 1.9 1.9

^a Case numbers correspond to the case scenarios outlined in Table 3-5 of the ODCE.

^b Area coverage of solid waste estimated by SURFER™.

^c Area coverage of solid waste estimated using WASP output.

^a Case numbers correspond to the case scenarios outlined in Table 3-5 of the ODCE.

^b Area coverage of solid waste estimated by SURFER™.

^c Area coverage of solid waste estimated using WASP output.

